



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

AUG 6 2013

REPLY TO THE ATTENTION OF:

WG-15

Mr. Gregory Saunders

[REDACTED]
[REDACTED]
[REDACTED]

Re: Freedom of Information (FOI)
(Identification No. EPA-R5-2013-007977)

Dear Mr. Saunders:

This is the Water Division's response to your Freedom of Information Act (FOIA) request of July 9, 2013 for the health effects of radium 226 and 228 in drinking water. We appreciate your concern that the radium in your drinking water is above the Maximum Contaminant Level (MCL) of 5 picoCuries per liter for combined radium 226 and 228. Very little data is available on the health effects and effects on pipes of combined radium 226 and 228, however, I will attempt to respond to your concerns.

The MCL has been set well below the levels for which health effects have been observed, with a factor of safety to protect the most vulnerable populations, such as children. While exposure to high levels of radium, such as found in miners or radium watch dial workers, may result in serious health effects such as bone, liver or breast cancer, exposure to the low levels found in your drinking water will only slightly increase your risks of these adverse health effects. It is unknown, exactly how much your risk will increase from ingesting drinking water at these low levels.

There is no information on damage to pipes caused by water containing radium in excess of 10 pCi/L. In my judgment, it is unlikely that radium at those low levels would cause the pipes to build up a radioactive scale. Radium forms compounds very similar to barium and calcium, so most of its compounds are soluble.

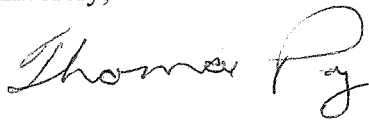
For more information on radium and its health effects, you may see the following websites for the U.S. Environmental Protection Agency (USEPA) and the Agency for Toxic Substances and Disease Registry (ATSDR):

- USEPA: <http://water.epa.gov/drink/contaminants/basicinformation/radionuclides.cfm>
- ATSDR: <http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=790&tid=154>

You may appeal this response to the National Freedom of Information Officer, U.S. EPA, FOIA and Privacy Branch, 1200 Pennsylvania Avenue, N.W. (2822T), Washington, DC 20460 (U.S. Postal Service Only), FAX: (202) 566-2147, E-mail: hq.foia@epa.gov. Only items mailed through the United States Postal Service may be delivered to 1200 Pennsylvania Avenue, NW. If you are submitting your appeal via hand delivery, courier service or overnight delivery, you must address your correspondence to 1301 Constitution Avenue, N.W., Room 6416J, Washington, DC 20004. Your appeal must be made in writing, and it must be submitted no later than 30 calendar days from the date of this letter. The Agency will not consider appeals received after the 30 calendar day limit. The appeal letter should include the identification number EPA-R5-2013-007977 as listed above. For quickest possible handling, the appeal letter and its envelope should be marked "Freedom of Information Act Appeal."

Under FOIA, a cost may be charged for reproducing documents and/or search time. However, since the total cost is under \$14.00 and the information provided is publicly available, there is no cost for this FOIA request. If you have further questions about the levels of radium in your drinking water, you may wish to contact the Illinois Department of Public Health, Division of Environmental Health, at (217) 782-5830.

Sincerely,

A handwritten signature in cursive script, appearing to read "Thomas Poy".

Thomas Poy
Chief, Ground Water Drinking Water Branch